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Abstract for an Invited Paper  
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**Stanley Corrsin Award Talk: Big and small swirls in the maze: Modeling turbulence in Large Eddy Simulations**  
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The existence of strongly coupled motions at many length and time scales is one of the most challenging aspects of turbulent flows. We describe this challenge in the specific context of Large Eddy Simulations and subgrid-scale modeling. Some examples of progress achieved through scale-aware self-consistency conditions, of which the dynamic model is a well-known example, will be presented. Laboratory and field data that have been used to illuminate various aspects of the problem will also be discussed.